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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA-2020-0112; Notice 2]

FCA US LLC, Denial of Petition for Decision of Inconsequential Noncompliance

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Denial of petition.

SUMMARY: FCA US LLC (f/k/a Chrysler Group LLC) ("FCA US") has determined that certain model year (MY) 2019–2020 Ram 4500/5500 Cab Chassis motor vehicles equipped with Mopar rear brake hoses and replacement brake hoses sold to FCA US dealers do not fully comply with Federal Motor Vehicle Safety Standard (FMVSS) No. 106, *Brake Hoses*. FCA US filed two noncompliance reports with NHTSA (the "Agency"), both dated October 22, 2020. FCA US subsequently petitioned NHTSA on November 13, 2020, for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety. This document announces and explains the denial of FCA US's petition.

FOR FURTHER INFORMATION CONTACT: Manuel Maldonado, Compliance Engineer, Office of Vehicle Safety Compliance, NHTSA, Tel. (202) 366-8731.

SUPPLEMENTARY INFORMATION:

I. Overview:

FCA US has determined that certain model year (MY) 2019–2020 Ram 4500/5500 Cab Chassis motor vehicles equipped with Mopar rear brake hoses and replacement brake hoses sold to FCA US dealers as replacement parts do not fully comply with paragraph S5.3.1 of FMVSS No. 106, *Brake Hoses* (49 CFR 571.106). FCA US filed two noncompliance reports, both dated October 22, 2020, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports.* FCA US subsequently petitioned NHTSA on November 13, 2020, for an exemption

from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety, pursuant to 49 U.S.C. 30118(d), 49 U.S.C. 30120(h), and 49 CFR part 556, *Exemption for Inconsequential Defect or Noncompliance*.

Notice of receipt of FCA US's petition was published in the Federal Register (86 FR 15548), pursuant to 49 U.S.C. 30118 and 30120, with a 30-day public comment period that began on March 23, 2021. No comments were received. The petition, and all supporting documents, can be found in docket NHTSA-2020-0112 on the Docket Management System's (FDMS) website at https://www.regulations.gov/.

II. Vehicles and Equipment Involved:

Approximately 26,961 MY 2019–2020 Ram 4500/5500 Cab Chassis motor vehicles, manufactured between February 10, 2019, and August 26, 2020, are potentially involved. Approximately 182 Mopar right rear brake hose replacement parts, with part numbers 68371722AA and 68371722AB, and left rear brake hose replacement parts, with part numbers 68371723AA and 68371723AB, which were manufactured between January 29, 2019, and August 20, 2020, are potentially involved.

III. Noncompliance:

FCA US states that the inside diameter of certain Mopar rear brake hoses equipped in certain model year (MY) 2019–2020 Ram 4500/5500 Cab Chassis motor vehicles and sold to FCA US dealers as replacement parts do not meet the FMVSS No. 106 requirement that every inside diameter of any section of a hydraulic brake hose assembly is not less than 64 percent of the nominal inside diameter of the brake hose, and therefore the parts do not comply with paragraph S5.3.1 of FMVSS No. 106. FCA US explains that this noncompliance is due to crimping of the hose without use of a mandrel, resulting in the inside diameter of the hose at the fitting being smaller than designed. Additionally, FCA US states that, in the worst-case scenario, some of these brake hoses measured 52.8 percent of the nominal inside diameter.

IV. Rule Requirements:

Paragraph S5.3.1 of FMVSS No. 106 provides that "[e]xcept for that part of an end fitting which does not contain hose, every inside diameter of any section of a hydraulic brake hose assembly shall be not less than 64 percent of the nominal inside diameter of the brake hose (S6.12)."

V. Summary of FCA US's Petition:

The following views and arguments presented in this section, "V. Summary of FCA US's Petition," are the views and arguments provided by FCA US and do not reflect the views of the Agency.

FCA US described the subject noncompliance and contended that the noncompliance is inconsequential as it relates to motor vehicle safety.

FCA US states that it "has completed testing showing that, in this particular circumstance, there is no safety concern with the noncompliant brake hose assemblies" that were built with an under-specification inside diameter (ID) size. FCA US claims that "the testing shows there is no concern for hose rupture and no risk of brake system failure due to pressure loss." FCA US says its testing also "shows there is no meaningful effect on vehicle braking performance" for the subject vehicles.

FCA US claims that the subject vehicle "achieves no more than 2,500 pounds per square inch (PSI) in the brake hose assemblies when performing FMVSS. 105 testing for stopping distance." According to FCA US, "FMVSS 106 specifies a minimum burst strength requirement of 7,000 PSI for brake hoses of 1/8"or smaller diameter" and "the subject brake hoses have a diameter of 1/8"." The FCA US says its "internal specification requires the supplier to perform burst testing daily, and the minimum requirement that all hose assemblies must meet is 9,000 PSI under the FMVSS. 106 test conditions." FCA US says "[t]he brake hose assemblies containing an out of specification ID all surpassed the requirement and showed no difference from those containing a compliant ID."

FCA US believes that because the "viscosity of brake fluid at colder temperatures increases, the flow rate of brake fluid will be reduced at colder temperatures," therefore FCA US characterizes the cold temperature testing as the worst-case scenario. FCA US tested noncompliant brake hose assemblies equipped in the subject vehicles and compliant brake hose assemblies for flow at ambient and at cold temperature, which included an overnight soak at -30° C. FCA US says "[t]he test was conducted using a panic brake application of 500 Newtons in 0.5 seconds per FMVSS 105 pedal force requirements and then held for an additional 5 seconds to ensure fluid flow to the wheel end." FCA US found that the "compliant and noncompliant brake hose assemblies showed no meaningful difference in the time they each took to reach 50 bar and 100 bar at either ambient or cold."

FCA US tested the subject vehicle for stopping distance according to FMVSS 105 testing procedures for vehicles over 10,000 pounds (lbs.) Gross Vehicle Weight Rating (GVWR), which FCA US characterizes as the worst-case scenario. FCA US explains that the test was conducted 6 times "on a vehicle that was slowed from a speed of 60 mph with a maximum pedal effort of 150 lbs. to determine if it could meet the required stopping distance requirements." FCA US says it focused on the "2nd effectiveness and 3rd effectiveness results" and used the best distance to calculate the Best Stop Percentage Margin. FCA US found that there was "no meaningful difference between the 2nd effectiveness and the 3rd effectiveness government specifications or the more stringent FCA US internal stopping requirements between a brake hose with an out of specification" ID and a brake hose with a compliant ID. FCA US completed two tests with brake hose assemblies with compliant ID sizes and one test with the subject out of specification ID size.

FCA US states it is not aware of any crashes, injuries, or customer complaints associated with the condition.

FCA US concludes that the subject noncompliance is inconsequential as it relates to motor vehicle safety, and that its petition to be exempted from providing notification of the

noncompliance, as required by 49 U.S.C. 30118, and a remedy for the noncompliance, as required by 49 U.S.C. 30120, should be granted.

VI. NHTSA's Analysis: The burden of establishing the inconsequentiality of a failure to comply with a performance requirement in a standard—as opposed to a labeling requirement with no performance implications—is more substantial and difficult to meet. Accordingly, the Agency has not found many such noncompliances inconsequential.[1]

In determining inconsequentiality of a noncompliance, NHTSA focuses on the safety risk to individuals who experience the type of event against which a recall would otherwise protect.[2] In general, NHTSA does not consider the absence of complaints or injuries when determining if a noncompliance is inconsequential to safety. The absence of complaints does not mean vehicle occupants have not experienced a safety issue, nor does it mean that there will not be safety issues in the future.[3]

The main purpose of the vehicle brake hose and its connected systems is to allow a motor vehicle operator to safely bring the vehicle to a complete stop. FMVSS No. 106 states that the purpose of the standard is to reduce deaths and injuries occurring as a result of brake system failure from pressure or vacuum loss due to hose or hose assembly rupture, and FMVSS No. 106 contains the constriction requirement in S5.3.1 to help facilitate that outcome.

NHTSA does not find FCA US's arguments persuasive that failure to meet the minimum safety requirements of FMVSS No. 106 is inconsequential to safety. FMVSS No. 105

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1 *Cf. Gen. Motors Corporation; Ruling on Petition for Determination of Inconsequential Noncompliance*, 69 FR 19897, 19899 (Apr. 14, 2004) (citing prior cases where noncompliance was expected to be imperceptible, or nearly so, to vehicle occupants or approaching drivers).

2 *See Gen. Motors, LLC; Grant of Petition for Decision of Inconsequential Noncompliance*, 78 FR 35355 (June 12, 2013) (finding noncompliance had no effect on occupant safety because it had no effect on the proper operation of the occupant classification system and the correct deployment of an air bag); *Osram Sylvania Prods. Inc.; Grant of Petition for Decision of Inconsequential Noncompliance*, 78 FR 46000 (July 30, 2013) (finding occupant using noncompliant light source would not be exposed to significantly greater risk than occupant using similar compliant light source).

3 *See Morgan 3 Wheeler Limited; Denial of Petition for Decision of Inconsequential Noncompliance*, 81 FR 21663, 21666 (Apr. 12, 2016); *see also United States v. Gen. Motors Corp.*, 565 F.2d 754, 759 (D.C. Cir. 1977) (finding defect poses an unreasonable risk when it "results in hazards as potentially dangerous as sudden engine fire, and where there is no dispute that at least some such hazards, in this case fires, can definitely be expected to occur in the future").

establishes minimum requirements related to motor vehicle braking under certain specified braking conditions, whereas FMVSS No. 106 describes, more broadly, minimum performance that pertain to brake hoses and brake hose assemblies to reduce deaths and injuries occurring as a result of brake system failure from pressure or vacuum loss due to rupture. For example, FMVSS No. 106 includes tests for constriction, whip resistance, and tensile strength, among others, that are intended to ensure a minimum level of safety beyond testing to the specific limited braking scenarios found in FMVSS No. 105.

FCA US explained that the root cause of the noncompliance is due to crimping of the hose without use of a mandrel that caused the inside diameter of the hose at the fitting to be smaller than designed. FCA US acknowledged in its petition that the hoses do not meet the requirements of paragraph S5.3.1 of FMVSS No. 106, stating that the worst cases of noncompliance only have 53% of the nominal inside diameter. This represents a significant decrease from FMVSS No. 106's 64% minimum safety requirement. NHTSA finds that any potential safety consequence resulting from FCA US's noncompliance may not present itself initially, but can emerge over the service life of the product. Furthermore, over-crimping a brake hose, which FCA US stated caused the noncompliance, is a common cause of brake hose failure in motor vehicles, and it can lead to cyclical fatigue that causes a shorter lifespan than a correctly crimped brake hose. Even if the subject noncompliant hoses passed a burst test when they were new, the over-crimping can result in higher stresses on the inside of the hose than designed and reduce the strength and cycle life of the hose.

In summary, the increased material stress and the loss of strength and cycle life due to over-crimping can lead to premature failure of the brake hose assemblies which negatively affects the vehicle's braking performance and creates a risk to motor vehicle safety.

VII. NHTSA's Decision: NHTSA has determined that FCA US has not met its burden of persuasion needed for the noncompliance with FMVSS No. 106 to be considered inconsequential to motor vehicle safety. FCA US's petition is hereby denied, and FCA US is therefore obligated

to provide notification of, and free remedy for, the aforementioned noncompliances, pursuant to 49 U.S.C. 30118 and 30120.

(Authority: 49 U.S.C. 30118, 30120: delegations of authority at 49 CFR 1.95 and 501.8)

Anne L. Collins,

Associate Administrator for Enforcement.

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